

=====

Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866)  
217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: [year=2009; month=12; day=1; hr=11; min=15; sec=31; ms=220; ]

=====

Application No: 10587326 Version No: 3.0

**Input Set:****Output Set:**

**Started:** 2009-11-25 11:58:14.556  
**Finished:** 2009-11-25 11:58:18.723  
**Elapsed:** 0 hr(s) 0 min(s) 4 sec(s) 167 ms  
**Total Warnings:** 18  
**Total Errors:** 0  
**No. of SeqIDs Defined:** 88  
**Actual SeqID Count:** 88

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (27)
W 213	Artificial or Unknown found in <213> in SEQ ID (30)
W 213	Artificial or Unknown found in <213> in SEQ ID (32)
W 213	Artificial or Unknown found in <213> in SEQ ID (36)
W 213	Artificial or Unknown found in <213> in SEQ ID (37)
W 213	Artificial or Unknown found in <213> in SEQ ID (41)
W 213	Artificial or Unknown found in <213> in SEQ ID (44)
W 402	Undefined organism found in <213> in SEQ ID (47)
W 213	Artificial or Unknown found in <213> in SEQ ID (48)
W 402	Undefined organism found in <213> in SEQ ID (52)
W 402	Undefined organism found in <213> in SEQ ID (65)
W 402	Undefined organism found in <213> in SEQ ID (66)
W 402	Undefined organism found in <213> in SEQ ID (76)
W 213	Artificial or Unknown found in <213> in SEQ ID (84)



# SEQUENCE LISTING

<110> Max-Plank-Gesellschaft zur Forderung der Wissenschaften  
E.V.  
Fischer, Gunter  
Edlich, Frank  
Weiwad, Matthias  
Jarczowski, Franziska  
Kullertz, Gerhard

<120> Method for Identifying and Producing Effectors of  
Calmodulin-Dependent Peptidyl-Prolyl cis/trans Isomerases

<130> VOS0068/US

<140> 10587326

<141> 2009-11-25

<150> PCT/EP05/000656

<151> 2005-01-24

<160> 88

<170> PatentIn version 3.5

<210> 1

<211> 4

<212> PRT

<213> Artificial sequence

<220>

<223> Chemically synthesized cAMP substrate

<400> 1

Ala Phe Pro Phe

1

<210> 2

<211> 5

<212> PRT

<213> Artificial sequence

<220>

<223> Chemically synthesized cAMP substrate

<400> 2

Ala Ala Glu Pro Arg

1

5

<210> 3

<211> 6

<212> PRT

<213> Artificial sequence

<220>

<223> Chemically synthesized cAMP substrate

<400> 3

Cys Phe Pro Ala Cys Phe

1 5

<210> 4

<211> 16

<212> PRT

<213> Artificial sequence

<220>

<223> Calmodulin sequence motif

<400> 4

Lys His Ala Ala Gln Arg Ser Thr Glu Thr Ala Leu Tyr Arg Lys Met

1 5 10 15

<210> 5

<211> 327

<212> PRT

<213> Homo sapiens

<400> 5

Met Gly Gly Ser Ala Leu Asn Gln Gly Val Leu Glu Gly Asp Asp Ala

1 5 10 15

Pro Gly Gln Ser Leu Tyr Glu Arg Leu Ser Gln Arg Met Leu Asp Ile

20 25 30

Ser Gly Asp Arg Gly Val Leu Lys Asp Val Ile Arg Glu Gly Ala Gly

35 40 45

Asp Leu Val Ala Pro Asp Ala Ser Val Leu Val Lys Tyr Ser Gly Tyr

50 55 60

Leu Glu His Met Asp Arg Pro Phe Asp Ser Asn Tyr Phe Arg Lys Thr

65 70 75 80

Pro Arg Leu Met Lys Leu Gly Glu Asp Ile Thr Leu Trp Gly Met Glu

85 90 95

Leu Gly Leu Leu Ser Met Arg Arg Gly Glu Leu Ala Arg Phe Leu Phe

100

105

110

Lys Pro Asn Tyr Ala Tyr Gly Thr Leu Gly Cys Pro Pro Leu Ile Pro  
 115 120 125

Pro Asn Thr Thr Val Leu Phe Glu Ile Glu Leu Leu Asp Phe Leu Asp  
 130 135 140

Cys Ala Glu Ser Asp Lys Phe Cys Ala Leu Ser Ala Glu Gln Gln Asp  
 145 150 155 160

Gln Phe Pro Leu Gln Lys Val Leu Lys Val Ala Ala Thr Glu Arg Glu  
 165 170 175

Phe Gly Asn Tyr Leu Phe Arg Gln Asn Arg Phe Tyr Asp Ala Lys Val  
 180 185 190

Arg Tyr Lys Arg Ala Leu Leu Leu Leu Arg Arg Arg Ser Ala Pro Pro  
 195 200 205

Glu Glu Gln His Leu Val Glu Ala Ala Lys Leu Pro Val Leu Leu Asn  
 210 215 220

Leu Ser Phe Thr Tyr Leu Lys Leu Asp Arg Pro Thr Ile Ala Leu Cys  
 225 230 235 240

Tyr Gly Glu Gln Ala Leu Ile Ile Asp Gln Lys Asn Ala Lys Ala Leu  
 245 250 255

Phe Arg Cys Gly Gln Ala Cys Leu Leu Leu Thr Glu Tyr Gln Lys Ala  
 260 265 270

Arg Asp Phe Leu Val Arg Ala Gln Lys Glu Gln Pro Phe Asn His Asp  
 275 280 285

Ile Asn Asn Glu Leu Lys Lys Leu Ala Ser Cys Tyr Arg Asp Tyr Val  
 290 295 300

Asp Lys Glu Lys Glu Met Trp His Arg Met Phe Ala Pro Cys Gly Asp  
 305 310 315 320

Gly Ser Thr Ala Gly Glu Ser  
 325

<210> 6  
<211> 412  
<212> PRT  
<213> Homo sapiens

<400> 6

Met Ala Ser Cys Ala Glu Pro Ser Glu Pro Ser Ala Pro Leu Pro Ala  
1 5 10 15

Gly Val Pro Pro Leu Glu Asp Phe Glu Val Leu Asp Gly Val Glu Asp  
20 25 30

Ala Glu Gly Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Asp Asp  
35 40 45

Leu Ser Glu Leu Pro Pro Leu Glu Asp Met Gly Gln Pro Pro Ala Glu  
50 55 60

Glu Ala Glu Gln Pro Gly Ala Leu Ala Arg Glu Phe Leu Ala Ala Met  
65 70 75 80

Glu Pro Glu Pro Ala Pro Ala Pro Ala Pro Glu Glu Trp Leu Asp Ile  
85 90 95

Leu Gly Asn Gly Leu Leu Arg Lys Lys Thr Leu Val Pro Gly Pro Pro  
100 105 110

Gly Ser Ser Arg Pro Val Lys Gly Gln Val Val Thr Val His Leu Gln  
115 120 125

Thr Ser Leu Glu Asn Gly Thr Arg Val Gln Glu Glu Pro Glu Leu Val  
130 135 140

Phe Thr Leu Gly Asp Cys Asp Val Ile Gln Ala Leu Asp Leu Ser Val  
145 150 155 160

Pro Leu Met Asp Val Gly Glu Thr Ala Met Val Thr Ala Asp Ser Lys  
165 170 175

Tyr Cys Tyr Gly Pro Gln Gly Arg Ser Pro Tyr Ile Pro Pro His Ala  
180 185 190

Ala Leu Cys Leu Glu Val Thr Leu Lys Thr Ala Val Asp Gly Pro Asp  
195 200 205

Leu Glu Met Leu Thr Gly Gln Glu Arg Val Ala Leu Ala Asn Arg Lys  
210 215 220

Arg Glu Cys Gly Asn Ala His Tyr Gln Arg Ala Asp Phe Val Leu Ala  
225 230 235 240

Ala Asn Ser Tyr Asp Leu Ala Ile Lys Ala Ile Thr Ser Ser Ala Lys  
245 250 255

Val Asp Met Thr Phe Glu Glu Glu Ala Gln Leu Leu Gln Leu Lys Val  
260 265 270

Lys Cys Leu Asn Asn Leu Ala Ala Ser Gln Leu Lys Leu Asp His Tyr  
275 280 285

Arg Ala Ala Leu Arg Ser Cys Ser Leu Val Leu Glu His Gln Pro Asp  
290 295 300

Asn Ile Lys Ala Leu Phe Arg Lys Gly Lys Val Leu Ala Gln Gln Gly  
305 310 315 320

Glu Tyr Ser Glu Ala Ile Pro Ile Leu Arg Ala Ala Leu Lys Leu Glu  
325 330 335

Pro Ser Asn Lys Thr Ile His Ala Glu Leu Ser Lys Leu Val Lys Lys  
340 345 350

His Ala Ala Gln Arg Ser Thr Glu Thr Ala Leu Tyr Arg Lys Met Leu  
355 360 365

Gly Asn Pro Ser Arg Leu Pro Ala Lys Cys Pro Gly Lys Gly Ala Trp  
370 375 380

Ser Ile Pro Trp Lys Trp Leu Phe Gly Ala Thr Ala Val Ala Leu Gly  
385 390 395 400

Gly Val Ala Leu Ser Val Val Ile Ala Ala Arg Asn  
405 410



<211> 457  
<212> PRT  
<213> Homo sapiens

<400> 7

Met Thr Thr Asp Glu Gly Ala Lys Asn Asn Glu Glu Ser Pro Thr Ala  
1 5 10 15

Thr Val Ala Glu Gln Gly Glu Asp Ile Thr Ser Lys Lys Asp Arg Gly  
20 25 30

Val Leu Lys Ile Val Lys Arg Val Gly Asn Gly Glu Glu Thr Pro Met  
35 40 45

Ile Gly Asp Lys Val Tyr Val His Tyr Lys Gly Lys Leu Ser Asn Gly  
50 55 60

Lys Lys Phe Asp Ser Ser His Asp Arg Asn Glu Pro Phe Val Phe Ser  
65 70 75 80

Leu Gly Lys Gly Gln Val Ile Lys Ala Trp Asp Ile Gly Val Ala Thr  
85 90 95

Met Lys Lys Gly Glu Ile Cys His Leu Leu Cys Lys Pro Glu Tyr Ala  
100 105 110

Tyr Gly Ser Ala Gly Ser Leu Pro Lys Ile Pro Ser Asn Ala Thr Leu  
115 120 125

Phe Phe Glu Ile Glu Leu Leu Asp Phe Lys Gly Glu Asp Leu Phe Glu  
130 135 140

Asp Gly Gly Ile Ile Arg Arg Thr Lys Arg Lys Gly Glu Gly Tyr Ser  
145 150 155 160

Asn Pro Asn Glu Gly Ala Thr Val Glu Ile His Leu Glu Gly Arg Cys  
165 170 175

Gly Gly Arg Met Phe Asp Cys Arg Asp Val Ala Phe Thr Val Gly Glu  
180 185 190

Gly Glu Asp His Asp Ile Pro Ile Gly Ile Asp Lys Ala Leu Glu Lys  
195 200 205

Met	Gln	Arg	Glu	Glu	Gln	Cys	Ile	Leu	Tyr	Leu	Gly	Pro	Arg	Tyr	Gly	210	215	220	
Phe	Gly	Glu	Ala	Gly	Lys	Pro	Lys	Phe	Gly	Ile	Glu	Pro	Asn	Ala	Glu	225	230	235	240
Leu	Ile	Tyr	Glu	Val	Thr	Leu	Lys	Ser	Phe	Glu	Lys	Ala	Lys	Glu	Ser	245	250	255	
Trp	Glu	Met	Asp	Thr	Lys	Glu	Lys	Leu	Glu	Gln	Ala	Ala	Ile	Val	Lys	260	265	270	
Glu	Lys	Gly	Thr	Val	Tyr	Phe	Lys	Gly	Gly	Lys	Tyr	Met	Gln	Ala	Val	275	280	285	
Ile	Gln	Tyr	Gly	Lys	Ile	Val	Ser	Trp	Leu	Glu	Met	Glu	Tyr	Gly	Leu	290	295	300	
Ser	Glu	Lys	Glu	Ser	Lys	Ala	Ser	Glu	Ser	Phe	Leu	Leu	Ala	Ala	Phe	305	310	315	320
Leu	Asn	Leu	Ala	Met	Cys	Tyr	Leu	Lys	Leu	Arg	Glu	Tyr	Thr	Lys	Ala	325	330	335	
Val	Glu	Cys	Cys	Asp	Lys	Ala	Leu	Gly	Leu	Asp	Ser	Ala	Asn	Glu	Lys	340	345	350	
Gly	Leu	Tyr	Arg	Arg	Gly	Glu	Ala	Gln	Leu	Leu	Met	Asn	Glu	Phe	Glu	355	360	365	
Ser	Ala	Lys	Gly	Asp	Phe	Glu	Lys	Val	Leu	Glu	Val	Asn	Pro	Gln	Asn	370	375	380	
Lys	Ala	Ala	Arg	Leu	Gln	Ile	Ser	Met	Cys	Gln	Lys	Lys	Ala	Lys	Glu	385	390	395	400
His	Asn	Glu	Arg	Asp	Arg	Arg	Ile	Tyr	Ala	Asn	Met	Phe	Lys	Lys	Phe	405	410	415	
Ala	Glu	Gln	Asp	Ala	Lys	Glu	Glu	Ala	Asn	Lys	Ala	Met	Gly	Lys	Lys	420	425	430	

Thr Ser Glu Gly Val Thr Asn Glu Lys Gly Thr Asp Ser Gln Ala Met  
435 440 445

Glu Glu Glu Lys Pro Glu Gly His Val  
450 455

<210> 8  
<211> 459  
<212> PRT  
<213> Homo sapiens

<400> 8

Met Thr Ala Glu Glu Met Lys Ala Thr Glu Ser Gly Ala Gln Ser Ala  
1 5 10 15

Pro Leu Pro Met Glu Gly Val Asp Ile Ser Pro Lys Gln Asp Glu Gly  
20 25 30

Val Leu Lys Val Ile Lys Arg Glu Gly Thr Gly Thr Glu Met Pro Met  
35 40 45

Ile Gly Asp Arg Val Phe Val His Tyr Thr Gly Trp Leu Leu Asp Gly  
50 55 60

Thr Lys Phe Asp Ser Ser Leu Asp Arg Lys Asp Lys Phe Ser Phe Asp  
65 70 75 80

Leu Gly Lys Gly Glu Val Ile Lys Ala Trp Asp Ile Ala Ile Ala Thr  
85 90 95

Met Lys Val Gly Glu Val Cys His Ile Thr Cys Lys Pro Glu Tyr Ala  
100 105 110

Tyr Gly Ser Ala Gly Ser Pro Pro Lys Ile Pro Pro Asn Ala Thr Leu  
115 120 125

Val Phe Glu Val Glu Leu Phe Glu Phe Lys Gly Glu Asp Leu Thr Glu  
130 135 140

Glu Glu Asp Gly Gly Ile Ile Arg Arg Ile Gln Thr Arg Gly Glu Gly  
145 150 155 160

Tyr Ala Lys Pro Asn Glu Gly Ala Ile Val Glu Val Ala Leu Glu Gly  
165 170 175

Tyr Tyr Lys Asp Lys Leu Phe Asp Gln Arg Glu Leu Arg Phe Glu Ile  
180 185 190

Gly Glu Gly Glu Asn Leu Asp Leu Pro Tyr Gly Leu Glu Arg Ala Ile  
195 200 205

Gln Arg Met Glu Lys Gly Glu His Ser Ile Val Tyr Leu Lys Pro Ser  
210 215 220

Tyr Ala Phe Gly Ser Val Gly Lys Glu Lys Phe Gln Ile Pro Pro Asn  
225 230 235 240

Ala Glu Leu Lys Tyr Glu Leu His Leu Lys Ser Phe Glu Lys Ala Lys  
245 250 255

Glu Ser Trp Glu Met Asn Ser Glu Glu Lys Leu Glu Gln Ser Thr Ile  
260 265 270

Val Lys Glu Arg Gly Thr Val Tyr Phe Lys Glu Gly Lys Tyr Lys Gln  
275 280 285

Ala Leu Leu Gln Tyr Lys Lys Ile Val Ser Trp Leu Glu Tyr Glu Ser  
290 295 300

Ser Phe Ser Asn Glu Glu Ala Gln Lys Ala Gln Ala Leu Arg Leu Ala  
305 310 315 320

Ser His Leu Asn Leu Ala Met Cys His Leu Lys Leu Gln Ala Phe Ser  
325 330 335

Ala Ala Ile Glu Ser Cys Asn Lys Ala Leu Glu Leu Asp Ser Asn Asn  
340 345 350

Glu Lys Gly Leu Phe Arg Arg Gly Glu Ala His Leu Ala Val Asn Asp  
355 360 365

Phe Glu Leu Ala Arg Ala Asp Phe Gln Lys Val Leu Gln Leu Tyr Pro  
370 375 380

Asn Asn Lys Ala Ala Lys Thr Gln Leu Ala Val Cys Gln Gln Arg Ile  
385 390 395 400

Arg Arg Gln Leu Ala Arg Glu Lys Lys Leu Tyr Ala Asn Met Phe Glu  
405 410 415

Arg Leu Ala Glu Glu Glu Asn Lys Ala Lys Ala Glu Ala Ser Ser Gly  
420 425 430

Asp His Pro Thr Asp Thr Glu Met Lys Glu Glu Gln Lys Ser Asn Thr  
435 440 445

Ala Gly Ser Gln Ser Gln Val Glu Thr Glu Ala  
450 455

<210> 9  
<211> 370  
<212> PRT  
<213> Homo sapiens

<400> 9

Met Ser His Pro Ser Pro Gln Ala Lys Pro Ser Asn Pro Ser Asn Pro  
1 5 10 15

Arg Val Phe Phe Asp Val Asp Ile Gly Gly Glu Arg Val Gly Arg Ile  
20 25 30

Val Leu Glu Leu Phe Ala Asp Ile Val Pro Lys Thr Ala Glu Asn Phe  
35 40 45

Arg Ala Leu Cys Thr Gly Glu Lys Gly Ile Gly His Thr Thr Gly Lys  
50 55 60

Pro Leu His Phe Lys Gly Cys Pro Phe His Arg Ile Ile Lys Lys Phe  
65 70 75 80

Met Ile Gln Gly Gly Asp Phe Ser Asn Gln Asn Gly Thr Gly Gly Glu  
85 90 95

Ser Ile Tyr Gly Glu Lys Phe Glu Asp Glu Asn Phe His Tyr Lys His  
100 105 110

Asp Arg Glu Gly Leu Leu Ser Met Ala Asn Ala Gly Arg Asn Thr Asn  
115 120 125

Gly Ser Gln Phe Phe Ile Thr Thr Val Pro Thr Pro His Leu Asp Gly

130

135

140

Lys His Val Val Phe Gly Gln Val Ile Lys Gly Ile Gly Val Ala Arg  
145 150 155 160

Ile Leu Glu Asn Val Glu Val Lys Gly Glu Lys Pro Ala Lys Leu Cys  
165 170 175

Val Ile Ala Glu Cys Gly Glu Leu Lys Glu Gly Asp Asp Gly Gly Ile  
180 185 190

Phe Pro Lys Asp Gly Ser Gly Asp Ser His Pro Asp Phe Pro Glu Asp  
195 200 205

Ala Asp Ile Asp Leu Lys Asp Val Asp Lys Ile Leu Leu Ile Thr Glu  
210 215 220

Asp Leu Lys Asn Ile Gly Asn Thr Phe Phe Lys Ser Gln Asn Trp Glu  
225 230 235 240

Met Ala Ile Lys Lys Tyr Ala Glu Val Leu Arg Tyr Val Asp Ser Ser  
245 250 255

Lys Ala Val Ile Glu Th